

CAMBRIDGE TECHNICALS LEVEL 3 (2016)

Examiners' report

IT

05838–05842, 05877

Unit 1 January 2025 series

Contents

Introduction	4
Unit 1 series overview	5
Section A overview	6
Question 1	6
Question 2	6
Question 3	7
Question 4	7
Question 5	8
Question 6	8
Question 7	9
Question 8	9
Question 9	10
Question 10	10
Question 11	11
Question 12	11
Question 13	12
Question 14	12
Question 15	13
Section B overview	14
Question 16 (a)	14
Question 16 (b)	15
Question 17 (a)	15
Question 17 (b)	16
Question 18 (a)	16
Question 18 (b)	17
Question 19	18
Question 20 (a)*	19
Question 20 (b)	20
Question 21	21
Question 22 (a)	22
Question 22 (b)*	23
Question 22 (c)	23
Question 23	24
Question 24 (a)	24

Question 24 (b)25

Question 24 (c)26

Introduction

Our examiners' reports are produced to offer constructive feedback on candidates' performance in the examinations. They provide useful guidance for future candidates.

The reports will include a general commentary on candidates' performance, identify technical aspects examined in the questions and highlight good performance and where performance could be improved. The reports will also explain aspects which caused difficulty and why the difficulties arose, whether through a lack of knowledge, poor examination technique, or any other identifiable and explainable reason.

Where overall performance on a question/question part was considered good, with no particular areas to highlight, these questions have not been included in the report.

A full copy of the question paper and the mark scheme can be downloaded from [Teach Cambridge](#).

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Unit 1 series overview

Overall, candidates attempted most of the questions on the exam paper. Section A was mostly answered well. Section B saw candidates picking up marks for knowing the content of the specification across a range of questions. However, this session highlighted areas of improvement needed of exam technique demonstrated by candidates' responses not being clear in what they were trying to express. As a result, marks were lost by candidates due to this lack of clarity, examiners were not able to award marks with certainty.

Candidates who did well on this paper generally:	Candidates who did less well on this paper generally:
<ul style="list-style-type: none"> • had a grasp of the knowledge taught in the unit, resulting in marks being consistently picked up across the exam paper • related their responses to the context in section B, in line with the vocational nature of the qualification • wrote responses that were clear and concise. 	<ul style="list-style-type: none"> • did not write responses that answered the question which was asked • did not know the unit content • did not apply context to their answers, providing generic answers that did not meet the criteria for the question • wrote responses that were unclear in their structure and content.

Section A overview

This section contains 15 multiple choice questions that do not rely on any context. These are designed to test knowledge recall. Candidates who picked up 10 or more marks in this section tended to go on pick up marks across the rest of the exam paper to gain a creditable final mark.

Question 1

1 Which form of storage is lightweight, highly portable and robust?

A Cloud

B Flash

C Hard drive

D SAS

[1]

Question 2

2 Which of the following is **not** a characteristic of fibre connectivity?

A Impervious to electromagnetic interference

B Increased bandwidth

C Low attenuation

D Widely available in rural areas

[1]

Question 3

3 Which type of software provides an opportunity to try before you buy?

A Bespoke

B Closed source

C Open source

D Shareware

[1]

Question 4

4 Which of the following is a ready-made operating system available for sale?

A Bespoke

B Database

C Off-the-shelf

D Open source

[1]

Question 5

5 Which of the following protocols is responsible for error and congestion reporting in the network layer of the TCP/IP stack?

A ICMP (Internet Control Message Protocol)

B POP (Post Office Protocol)

C TCP (Transmission Control Protocol)

D UDP (User Datagram Protocol)

[1]

Question 6

6 Complete the following sentence.

Peer-to-Peer networks contain PCs that _____ .

A Are directly connected to each other

B Connect through a hub

C Transfer data through a server

D Use network-level login details

[1]

Generally, Questions 1 – 6 were well answered by candidates.

Question 7

7 Which of the following is **not** required to configure a network?

A Default gateway

B Hypervisor

C IP address

D Subnet mask

[1]

While being mostly well answered, many candidates did not take note of the emboldened 'not' in the question. As a result, many candidates provided responses that are actually used to configure a network.

Question 8

8 Which of the following is used to create a local area network (LAN)?

A ADSL

B Ethernet

C ISDN

D Leased Line

[1]

Question 9

9 Complete the following sentence.

The purpose of a Customer Relationship Management (CRM) business system is to

_____ .

A Gather information to decide which staff can help a caller

B Generate information to aid business decision-making

C Provide a single contact point for business users

D Provide a system to store and manage business user leads

[1]

Question 10

10 Which of the following allows for an immediate response to extra questions?

A Closed questioning

B Email

C Group discussion

D Letter

[1]

Question 11

11 Which of the following is a communication skill that **cannot** be used on an email?

A Body language

B Formal language

C Informal language

D Instant messaging

[1]

Question 12

12 Which of the following is a need that can affect the scale of change required by an organisation?

A Bias

B Code of conduct

C Earthquake

D Improved networking

[1]

Question 13

13 Which of the following is a physical security method?

A Anti-virus

B Encryption

C Radio Frequency Identification (RFID)

D Username/Password

[1]

Question 14

14 Which legislation covers the safe disposal of computer equipment?

A Computer Misuse Act

B Data Protection Act

C Environmental Protection Act

D General Data Protection Regulation

[1]

Question 15

15 Which of the following is a benefit to a business of using a mainframe computer?

A Cheap

B Portable

C Scalable

D Small in physical size

[1]

Most candidates gave good responses to Questions 8 – 15.

Section B overview

This section was based on a scenario focusing on a school upgrading its IT system. So, to gain full marks in questions, candidates had to apply their knowledge to the context. This reflects the vocational aspect of the qualification. As a result, where candidates tended to pick up the 'knowledge' mark(s) in a question, the vocational application was not given as often. This restricted the overall marks given to some candidates. This ability to apply the knowledge to the context is where centres are advised to direct their attention for future sessions.

Question 16 (a)

A school is upgrading its network. Over the last few years staff have been able to work, flexibly at home in their planning time. Many events including open evenings and progress consultation evenings are also now taking place online.

16 The school manages its own network, with a server room on the school premises.

(a) Identify and describe **two** input devices that could be used in the server room.

Input Device

Description

.....

.....

Input Device

Description

.....

.....

[4]

On the whole, candidates' responses were strong , with most candidates being given at least 2 marks. However, it was concerning that many candidates could not identify an input device.

Where the expansion marks were given, candidates described the use of the device in the context of the server room. Candidates who did not get marks did so by being too vague or not linking to the devices use in the server room context, referring more to the use by teachers and pupils.

Question 16 (b)

The CRT monitors in the server room are being replaced with touchscreen monitors.

(b) Explain **one** benefit of using touchscreen monitors in the server room.

.....

.....

.....

..... [2]

Generally, candidates' responses were correct with most candidates gaining at least 1 mark. The second mark tended not to be given if candidates had not clearly explained the reason for the benefit, i.e. in the context of use in the server room.

The Cambridge Technical in IT is a vocational course, which requires responses to be applied and contextualised to the vocational scenario presented.

Question 17 (a)

17 The network manager has purchased a tablet computer to use to monitor the school network.

(a) Explain **one** advantage of using a tablet computer.

.....

.....

.....

..... [2]

Most candidates were given at least 1 mark for their responses to this question. Marks were not given on the expansion mark if candidates' explanations were not clear about how the advantage benefitted the network manager in the context.

Question 17 (b)

(b) Explain **one** disadvantage of using a tablet computer.

.....

.....

.....

..... [2]

For the most part, candidates responded well, with many getting at least 1 mark. Marks were dropped on the expansion mark for not being clear about how the disadvantage impacted the context of monitoring the network.

Question 18 (a)

18 Packets of data are transferred across the network.

(a) Explain what is a **byte**.

.....

.....

.....

..... [2]

This question was not answered as well as expected. Candidates often repeated the question terminology, i.e. 'it's a packet of data' or were incorrect in the value of a byte.

Question 18 (b)

(b) Explain what is a **kilobyte**.

.....

.....

.....

..... [2]

As with Question 18 (a), candidates' responses were not as strong as expected. Candidates again repeated the question terminology, i.e. "it's a packet of data", without clarifying what it means. A number of marks were also lost for the incorrect size 1024. The specification requires candidates to know the different systems, metric and binary.

Exemplar 1

A kilobyte is another metric value which
is then equaled to 1000

In this exemplar, the candidate only gained 1 mark for this response as they clearly stated that a kilobyte is a metric value, which is correct. However, they did not get the second mark as the response was too vague. While they are correct about it being 1000, they did not clarify what the 1000 refers to, i.e. bytes.

Question 19

19 The school has several physical servers in the server room.

Explain the **purpose** of each of the following servers.

Web server

.....

.....

.....

.....

Mail server

.....

.....

.....

.....

Print server

.....

.....

.....

.....

[6]

This question saw, as expected, a wide range of marks given. Candidates who did well were clear about the purpose of the server mentioned. Less successful candidates provided responses that were descriptive in nature about how they used the tool (web, email, printing) or confused the use of different applications with the purpose of the said server. Candidates need to be clear about what the key word 'purpose' means and answer in relation to its meaning.

Question 20 (b)

(b) Explain **two** advantages and **one** disadvantage of using project management software to manage the upgrading of the school computer system.

Advantage 1

.....

.....

.....

.....

Advantage 2

.....

.....

.....

.....

Disadvantage

.....

.....

.....

.....

[6]

Candidates generally were not clear about what project management software was and its use. Responses that did not get marks were focused on software that automated the upgrading of software across a network, which is incorrect.

Question 21

21 Problems occur during the installation of the upgraded computer system.

Explain how the troubleshooting tools of logs and baselines could be used to solve the problems.

Logs

.....

.....

.....

.....

Baselines

.....

.....

.....

.....

[4]

Most candidates answered this question competently.

However, less successful responses repeated the wording in the question, i.e. 'it logs issues' and were unclear about how the logs are used . Responses were then confused about how these logs were used specifically, as detailed on the mark scheme.

The baseline tool was either answered well, with candidates getting both of the marks for explaining how the 'before and after' comparison would be used, or were not given marks at all.

Question 22 (a)

22 The network manager must explain the upgraded system to the school governors.

(a) Identify and describe **one** communication technology that the network manager could use for this task.

Communication Technology

Description

.....

.....

.....

..... [3]

Most candidates were given at least 1 mark for this question by identifying a suitable communication technology. However, some candidates were not given marks as they did not describe how it could be used in the context of the question. They merely repeated the question wording, i.e. 'it allows them to explain the upgraded system'.

Exemplar 2

Communication Technology ..Email.....

Allows the network manager

Description ..~~Allows users~~ to write detailed description.....

..of the upgraded system and additionally it.....

..allows the user to attach files, videos or pictures.....

..and also attach the email of the other governors.....

..so that they can receive the email together..... [3]

This candidate clearly identified the communication technology used, which was email. They then described how the extra detail can be included using attachments and how the same email can be sent to all the governors at the same time so that they all get the information.

Question 24 (b)

Anti-virus software is installed on the upgraded computer system.

(b) Explain why anti-virus software should be installed on the upgraded computer system.

.....

.....

.....

..... [2]

Although many candidates received full marks on this question, their responses revealed a recurring issue in this series: a lack of clarity in written answers. The main reason for installing anti-virus software is to protect the data and computer system. However, candidates generally did not state this for 1 mark. Instead, candidates preferred to describe how it scans, quarantines or removes a virus. This forced the candidates to work harder for the marks than they needed to.

Exemplar 3

Anti-virus software should be installed
on the upgraded computer system to
prevent spams and viruses

..... [2]

The candidate achieved 1 mark on this question for the concept of increased security/protection through the point of preventing (spams and) viruses. However, they do not explain how this is applied to the context for the expansion/second mark.

Question 24 (c)

(c) Identify **two** other forms of digital security that can be used on the virtualised server.

1

.....

2

.....

[2]

Most candidates gained both marks on this question. Some were not given marks for including physical security methods.

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